

WHAT IS CLAIMED IS:

1. An integrated smart local wireless spread spectrum communication system comprising:

at least one mobile wireless communication unit;

5 at least one first base station and one second base station, each providing a cell and having at least one smart antenna array, so that the mobile wireless communication unit in a cell can communicate with a communication device via the base station; and

10 a central control unit for controlling data exchange between the first base station and second base station, and storing user data of the mobile wireless communication unit communication unit;

wherein, in the cell, communication band is divided into a plurality of channels; the first base station and the second base station trace the mobile wireless communication unit by their antennas, respectively, and signal strength of the mobile wireless communication unit received by the antennas are used to determine a moving direction of the mobile wireless communication units, whereby, when the mobile wireless communication unit moves from the first base station towards the second base station, the central control unit notifies the second base station, so that the second base station can prepare to perform a handoff process in advance.

2. The integrated smart local wireless spread spectrum communication system as claimed in claim 1, wherein the first and

second base stations determine the signal strength of the mobile wireless communication unit through a first specific value, a second specific value, and a third specific value; the third specific value is larger than the second specific value; the second specific value is larger than the first specific value; when the first base station detects that the mobile wireless communication unit moves from the first base station towards the second base station and the signal strength received by the first base station is smaller than the third specific value, the first base station performs a handoff process to the mobile wireless communication unit.

3. The integrated smart local wireless spread spectrum communication system as claimed in claim 1, wherein the received signal strengths of the first base station and second base station are used to arrange priorities of the channels.

4. The integrated smart local wireless spread spectrum communication system as claimed in claim 1, wherein different cells are distinguished by employing different direct sequence spread spectrums, so that adjacent cells can use the same channels to perform wireless communications for different wireless communication units.

5. The integrated smart local wireless spread spectrum communication system as claimed in claim 1, wherein the communication band is 2.4GHz unlicensed band.

6. The integrated smart local wireless spread spectrum

communication system as claimed in claim 1, wherein the antennas of the first base station and second base station are smart antennas.

7. The integrated smart local wireless spread spectrum communication system as claimed in claim 2, wherein when the
5 received signal strength is smaller than the first specific value, the first base station disconnects its connection to the mobile wireless communication unit.

8. The integrated smart local wireless spread spectrum communication system as claimed in claim 2, wherein when the
10 received signal strength is larger than the third specific value, the first base station connects the first mobile wireless communication unit for communication.

9. The integrated smart local wireless spread spectrum communication system as claimed in claim 2, wherein when the
15 received signal strength is smaller than the second specific value and larger than the first specific value, the first base station switches control to the second base station, and a new position of the wireless communication unit is reported to the central control unit.